/*Design, Develop and Implement a menu driven Program in C for the following
Array operations
a. Creating an Array of N Integer Elements
b. Display of Array Elements with Suitable Headings
c. Inserting an Element (ELEM) at a given valid Position (POS)
d. Deleting an Element at a given valid Position(POS)
e. Exit.
Support the program with functions for each of the above operations.*/

```
#include<stdio.h>
#include<stdlib.h>
#define MAX 5
int a[MAX], pos, elem;
int n = 0;
void create();
void display();
void insert();
void delete();
void main()
{
int choice;
while(1)
 {
 printf("\n\n~~~~MENU~~~~");
 printf("\n=>1. Create an array of N integers");
 printf("\n=>2. Display of array elements");
 printf("\n=>3. Insert ELEM at a given POS");
 printf("\n=>4. Delete an element at a given POS");
 printf("\n=>5. Exit");
 printf("\nEnter your choice: ");
 scanf("%d", &choice);
 switch(choice)
 {
 case 1: create();
 break;
 case 2: display();
 break;
 case 3: insert();
 break;
 case 4: delete();
 break;
 case 5: exit(1);
 break;
 default: printf("\nPlease enter a valid choice:");
 }
 }
}
void create()
{
nt i;
 printf("\nEnter the number of elements: ");
 scanf("%d", &n);
 printf("\nEnter the elements: ");
 for(i=0; i<n; i++)
 {
```

```
 scanf("%d", &a[i]);
 }
}
void display()
{
 int i;
 if(n == 0)
 {
 printf("\nNo elements to display");
 return;
 }
 printf("\nArray elements are: ");
 for(i=0; i<n;i++)
 printf("%d\t ", a[i]);
}
void insert()
{
 int i;
 if(n == MAX)
 {
 printf("\nArray is full. Insertion is not possible");
 return;
 }
 do
 {
 printf("\nEnter a valid position where element to be inserted: ");
 scanf("%d", &pos);
 }while(pos > n);
 printf("\nEnter the value to be inserted: ");
scanf("%d", &elem);
 for(i=n-1; i>=pos ; i--)
 {
 a[i+1] = a[i];
 }
 a[pos] = elem;
 n = n+1;
 display();
}
void delete()
{
int i;

if(n == 0)
 {
 printf("\nArray is empty and no elements to delete");
 return;
 }
 do
 {
 printf("\nEnter a valid position from where element to be deleted: ");
 scanf("%d", &pos);
 }while(pos>=n);
 elem = a[pos];
 printf("\nDeleted element is : %d \n", elem);
 for( i = pos; i< n-1; i++)
```

```
 {
 a[i] = a[i+1];
 }
 n = n-1;
display();
}
```